

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	21	(US-20030150600-\$ or US-20020090523-\$ or US-20050082051-\$ or US-20040031598-\$ or US-20060231170-\$).did. or (US-5538078-\$ or US-4830101-\$ or US-5201119-\$ or US-5070938-\$ or US-6571864-\$ or US-4726886-\$ or US-4368776-\$ or US-6306226-\$ or US-4427034-\$ or US-6874230-\$ or US-5072789-\$).did. or (JP-57098798-\$ or JP-10263799-\$ or JP-05071893-\$).did. or (JP-05071893-\$ or JP-06228731-\$). did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 23:33
L5	15	S69 and (spray or sprayed)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:02
L6	4	S69 and (spray or sprayed) with (thermal or thermally)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 23:33
L7	1	S69 and (etch or etching)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:02
L8	1	S69 and (etch or etching or etched)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:53
L9	9	S69 and (zr or zirconium)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:06
L10	2	S69 and (zr or zirconium) and (fluoridation or fluoride)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:06
L11	2	fluoridation near2 zirconium with chemical with conversion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:07
L12	2	fluoridation near2 zirconium same chemical with conversion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:07

## EAST Search History

L13	2	fluoridation near2 zirconium and conversion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:08
L14	2	fluoridation near2 zirconium	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:08
L15	2	fluoridation near3 zirconium	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:08
L16	2200	fluoride near3 zirconium	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:08
L17	15	fluoride near zirconium with chemical with conversion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:04
L18	19	zirconium near fluoride same chemical near conversion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:12
L19	11	minami.in. and fluoride and zr and cu	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:13
L20	5	S69 and (cu and mn)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:45
L21	11	S69 and (zn or zinc) with fin	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:49
L22	37	zinc with fins with sacrificial	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:53

## EAST Search History

L23	25	(US-20030150600-\$ or US-20020090523-\$ or US-20050082051-\$ or US-20040031598-\$ or US-20060231170-\$ or US-20070235914-\$ or US-20050034793-\$).did. or (US-5538078-\$ or US-4830101-\$ or US-5201119-\$ or US-5070938-\$ or US-6571864-\$ or US-4726886-\$ or US-4368776-\$ or US-6306226-\$ or US-4427034-\$ or US-6874230-\$ or US-5072789-\$ or US-5217547-\$ or US-5021106-\$).did. or (JP-57098798-\$ or JP-10263799-\$ or JP-05071893-\$).did. or (JP-05071893-\$ or JP-06228731-\$). did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 00:53
L24	1	S88 and (etch or etched or etching)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:01
L25	13	S88 and zirconium	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:02
L26	1	S88 and zirconium with fluoride	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:02
L27	10	fluoride near zirconium with chemical with conversion and chromate	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:06
L28	13	S88 and chromate	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/10 01:06
S1	10	165/133.ccls. and (inner near fin or turbulator) with (layer or coating or alloy)	USPAT	OR	ON	2007/12/05 13:07
S2	6	165/133.ccls. and (inner near fin or turbulator) with (layer or coating or alloy) and corrosion	USPAT	OR	ON	2007/12/05 13:05
S3	8	("3891400"   "4209059"   "5069980"   "5316863"   "5422191"   "5771962"   "6120848").PN. OR ("6234243").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/05 13:06
S4	6	165/133.ccls. and (inner near fin or turbulator) with (clad or cladding)	USPAT	OR	ON	2007/12/05 13:08

## EAST Search History

S5	4	165/134.1.ccls. and (inner near fin or turbulator) with (layer or coating or clad or cladding)	USPAT	OR	ON	2007/12/05 13:07
S6	9	S4 or S5	USPAT	OR	ON	2007/12/05 13:08
S7	20	(165/133 or 165/134.1).ccls. and ((inner or internal or inside) near fin or turbulator) with (clad or cladding or layer or coating)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/05 13:11
S8	9	inner adj fin with (clad or cladding or layer or coating) with (corrosion or sacrificial or zinc)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/05 13:20
S9	2	"10109158".did.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/05 13:21
S10	274	matsuda.in. and fin	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/05 13:21
S11	46	matsuda.in. and heat transfer tube	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2007/12/05 13:22
S12	154	165/133.ccls. and 165/134.1.ccls. and (layer or clad or cladding or coating)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2007/12/05 13:23

## EAST Search History

S13	154	165/133.ccls. and 165/134.1.ccls. and (layer or clad or cladding or coating)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2007/12/05 13:23
S14	32	("3960208").URPN.	USPAT	OR	ON	2007/12/05 13:29
S15	44	"165"/\$.ccls. and ni adj (p or mo or sn or cu or co)	USPAT	OR	ON	2007/12/05 13:31
S16	18	"165"/\$.ccls. and ni adj (p or mo or sn or cu or co) same (aluminum or al)	USPAT	OR	ON	2007/12/05 13:33
S17	1	("5069980").PN.	USPAT	OR	OFF	2007/12/05 13:33
S18	8	(US-20010047861-\$).did. or (US-6234243-\$ or US-5894054-\$ or US-6098704-\$ or US-3960208-\$ or US-5422191-\$).did. or (JP-10109158-\$).did. or (JP-10109158-\$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:33
S19	5	S18 and (nickel or ni or phosphorus or copper or cu or tin or sn)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:35
S20	14631	corrosion with (nickel or ni or phosphorus or copper or cu or tin or sn) with (coating or layer or clad)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:36
S21	7126	corrosion with resistance with (nickel or ni or phosphorus or copper or cu or tin or sn) with (coating or layer or clad)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:36
S22	229	aluminum near2 alloy with corrosion with resistance with (nickel or ni or phosphorus or copper or cu or tin or sn) with (coating or layer or clad)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:37
S23	123	aluminum near2 alloy with corrosion with (nickel or ni or phosphorus or copper or cu or tin or sn) near2 (coating or layer or clad)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:39
S24	81	aluminum near2 alloy.ti. and corrosion with (nickel or ni or phosphorus or copper or cu or tin or sn) near2 (coating or layer or clad)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:40

## EAST Search History

S25	4494	nickel adj phosphorus	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:41
S26	924	nickel adj phosphorus with aluminum	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:41
S27	13	nickel adj phosphorus with aluminum with (corrosion)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:44
S28	56	("2069566"   "2633631"   "2643221"   "2684892"   "2739107"   "3041254"   "3041255"   "3104167"   "3192136"   "3303111"   "3449221"   "3475293"   "3507243"   "3658569"   "3759803"   "3817774"   "3847681"   "3856653"   "3956097"   "4022679"   "4033831"   "4042382"   "4077864"   "4086149"   "4106975"   "4106976"   "4108739"   "4113248"   "4127709"   "4160049"   "4169008"   "4184925"   "4224133"   "4229265"   "4374707"   "4380493"   "4528070"   "4529668").PN. OR ("4767509").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/05 13:43
S29	128	nickel adj copper with aluminum with (corrosion)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:44
S30	46	aluminum.ti. and nickel adj copper with (corrosion)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:46
S31	179	aluminum.ti. and nickel with cobalt with corrosion	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/05 13:46
S32	7	"165"/\$.ccls. and (zinc or zn) with chemical adj conversion	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 16:24

## EAST Search History

S33	11	("4452945"   "4830101"   "4939015"   "4954372"   "5035282"   "5439710"   "5474956").PN. OR ("5538078").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 14:42
S34	0	minami.in. and exchanger.ti. and (hydrophilic or hydrophobic)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 14:47
S35	67	chromate near2 zinc near2 phosphate with (corrosion or corrode)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 14:47
S36	0	chromate near2 zinc near2 phosphate with (corrosion or corrode) near aluminum	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 14:47
S37	0	chromate near2 zinc near2 phosphate with (corrosion or corrode) near aluminum	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 14:48
S38	12	chromate near2 zinc near2 phosphate with (corrosion or corrode) with aluminum	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 14:49
S39	3	aluminum.ti. and chromate near2 zinc near2 phosphate with (corrosion or corrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 14:50
S40	14	aluminum.ti. and chromate with zinc near2 phosphate same (corrosion or corrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 14:52
S41	74	chemical near conversion with aluminum with (etch or etching)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 14:53

## EAST Search History

S42	0	corrosion with proof with heat adj exchanger.in.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/12/07 16:20
S43	11	(US-20030150600-\$ or US-20020090523-\$).did. or (US-5538078-\$ or US-4830101-\$ or US-5201119-\$ or US-5070938-\$ or US-6571864-\$ or US-4726886-\$ or US-4368776-\$ or US-6306226-\$). did. or (JP-57098798-\$).did.	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 16:22
S44	1	S43 and (zn or zinc) with (g or gram)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 16:23
S45	10	S43 and (zn or zinc)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 16:23
S46	14	"165"/\$.ccls. and (zinc or zn) with (coating or layer or spraying or spray) same (chemical adj conversion or chromate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/07 16:25
S47	16	("3050786"   "3650005"   "4193180").PN. OR ("4368776"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:32
S48	0	"165"/\$.ccls. and zinc with (diffuse or diffused) with layer with (spray or sprayed)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:32
S49	4	"165"/\$.ccls. and zinc near2 layer with (spray or sprayed)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:36
S50	0	"165"/\$.ccls. and zinc near2 (spray or sprayed) with diffuse	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:36
S51	0	"165"/\$.ccls. and zinc near2 (spray or sprayed) with diffused	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:37
S52	1	"165"/\$.ccls. and zinc near2 (spray or sprayed) same (diffuse or diffused)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/07 16:37



## EAST Search History

S53	16	(US-20030150600-\$ or US-20020090523-\$ or US-20050082051-\$ or US-20040031598-\$).did. or (US-5538078-\$ or US-4830101-\$ or US-5201119-\$ or US-5070938-\$ or US-6571864-\$ or US-4726886-\$ or US-4368776-\$ or US-6306226-\$ or US-4427034-\$ or US-6874230-\$ or US-5072789-\$).did. or (JP-57098798-\$).did.	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 17:39
S54	1	S53 and (etch or etched or etching)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 17:52
S55	9	S53 and (zr or zirconium)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 17:54
S56	10	S53 and (spray or sprayed)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 17:54
S57	3	S53 and (spray or sprayed) with zinc	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 18:22
S58	33	kuroda.in. and exchanger.ti. and corrosion.ti.	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 18:22
S59	27	kuroda.in. and exchanger.ti. and corrosion.ti. and (zn or zinc)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 18:22
S60	1	kuroda.in. and exchanger.ti. and corrosion.ti. and (zn or zinc) and (spray or sprayed)	US-PGPUB; USPAT; JPO	OR	ON	2007/12/07 18:24
S61	1	kuroda.in. and exchanger.ti. and corrosion.ti. and (zn or zinc) and (spray or sprayed)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2007/12/07 18:25
S62	257	thermal near spraying with zinc	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2007/12/07 18:25
S63	129	thermal near spraying with zinc with aluminum	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2007/12/07 18:26

## EAST Search History

S64	12	thermal near spraying with zinc with aluminum and exchanger	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2007/12/07 18:26
S65	20	(US-20030150600-\$ or US-20020090523-\$ or US-20050082051-\$ or US-20040031598-\$ or US-20060231170-\$).did. or (US-5538078-\$ or US-4830101-\$ or US-5201119-\$ or US-5070938-\$ or US-6571864-\$ or US-4726886-\$ or US-4368776-\$ or US-6306226-\$ or US-4427034-\$ or US-6874230-\$ or US-5072789-\$).did. or (JP-57098798-\$ or JP-10263799-\$). did. or (JP-05071893-\$ or JP-06228731-\$).did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 20:32
S66	6	S65 and condenser	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 20:34
S67	6	S65 and condenser and zinc	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 20:36
S68	2	"05071893".did.	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/12/09 20:36